



## **Kentucky's Certification Program**

### Dates for 2011

#### 2011 Statewide Environmental Education Certification Course

- ❖ March 3-5, 2011: First Workshop - Lake Cumberland State Resort Park
- ❖ March 31- April 2, 2011: Second Workshop - Rough River State Resort Park
- ❖ March 31, 2011: Environmental Literacy Assessment
- ❖ November 3-5, 2011: Third Workshop Louisville Zoo, Louisville KY
- ❖ December 1-3, 2011: Fourth Workshop Rough River State Resort Park
- ❖ January 31, 2011 All assessments submitted
- ❖ By March 3, 2011: Graduation for 2011 Class

### Mentors

Any participant may request a mentor to provide support and assistance during the course. Mentors are volunteers and graduates of the Kentucky Certification Program. Mentors are assigned on the basis of geographic proximity.



## Kentucky's Certification Program

### Expectations for Members of the Environmental Education Certification Class

1. Members of the class are required to attend all workshops (make-up work will be given in cases of emergency). The reason for this is two-fold. First, the courses model good environmental education practices. Understanding and using good EE practices are at least as important as learning the content. Second, interacting with other environmental educators from diverse backgrounds and viewpoints enhances our own learning. It also builds a stronger community to advocate for environmental literacy in the Commonwealth of Kentucky.
2. Members of the class must pass all assessments in order to be certified. A minimum score of 75 % is generally considered a passing grade for each assessment. However, if any applicant does not earn at least 75 % on each assessment, all efforts will be made to assist the applicant so he or she will gain the necessary knowledge and skills to pass the assessment on the next try.
3. Applicants will be required to sign a code of ethics for environmental educators at the culmination of the certification program.
4. Applicants completing certification may be asked to voluntarily mentor members of subsequent classes.
5. Applicants are encouraged to join their national and state environmental education organizations. Kentucky's EE Association (KAEE) is one of the oldest state EE organizations in the United States and has won national awards for its work. (See [www.kaee.org](http://www.kaee.org)) The North American Association for Environmental Education (NAAEE) represents environmental educators in the United States, Canada, Mexico, and other countries. (See [www.naaee.org](http://www.naaee.org))
6. To maintain certification in good standing, graduates must complete continuing educational credit.



## Kentucky's Certification Program

### Cost Overview

The cost for certification includes, four 2-night stays at Kentucky State Parks or a hotel, plus meals, mileage, and the registration fee listed below. A rough estimate for cost would be approximately \$1,000.00. For those willing to share rooms, the cost will be lower. The KEEC covers the cost for materials, instruction, and administration: a value of approximately \$1,800.00 per student.

The registration fee for certification is \$50.00. Checks must be made payable to the Kentucky State Treasurer and sent to the following address by February 22, 2009.

Kentucky Environmental Education Council  
500 Mero Street  
CPT Room 2107  
Frankfort KY 40601

If you are a state employee planning to inter-account payment, please call or email our office to obtain the inter-account information at 800-882-5271.

A limited number of need-based scholarships are available for this program. For more information, please contact KEEC via email at [Jane.Eller@ky.gov](mailto:Jane.Eller@ky.gov).

### Program Format

The Kentucky certification program is taught in the following format:

- ◆ There are four, three-day workshops (two held in both the spring and the fall).
- ◆ Each workshop begins at 1:00 PM Thursday and ends by 12:00 PM Saturday.
- ◆ Workshops usually are held at Kentucky State Parks.
- ◆ One independent study is required between the spring and fall workshops.

## **Code of Ethics and Standard Practices for Professional Environmental Educators in Kentucky**

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### **Statement of Purpose**

The environmental educator shall comply with standard practices and ethical conduct toward students, whatever their age or developmental level, toward professional colleagues, school officials, parents, program participants and members of the community and shall safeguard academic freedom. The Kentucky environmental educator, in maintaining the dignity of the profession, shall respect and obey the law, demonstrate personal integrity, and exemplify honesty. The Kentucky environmental educator, in exemplifying ethical relations with colleagues, shall extend just and equitable treatment to all members of the profession. The Kentucky environmental educator, in accepting a position of public trust, shall measure success by the progress of each student toward realization of his or her potential as an effective citizen.

### **Standards**

(1) Professional Ethical Conduct, Practices and Performance. (Note: the word student refers to participants of all ages.)

Standard 1.1. The educator will not knowingly advocate for a particular environmental viewpoint in the guise of environmental education.

Standard 1.2. The educator shall not knowingly engage in deceptive practices regarding official policies of his or her agency or organization.

Standard 1.3. The educator shall not knowingly misappropriate, divert, or use monies, personnel, property, or equipment committed to his or her charge for personal gain or advantage.

Standard 1.4. The educator shall not submit fraudulent requests for reimbursement, expenses, or pay.

Standard 1.5. The educator shall not use institutional or professional privileges for personal or partisan advantage.

Standard 1.6. The educator shall neither accept nor offer gratuities, gifts, or favors that impair professional judgment or to obtain special advantage. This standard shall not restrict the acceptance of gifts or tokens offered and accepted openly from students, parents, or other persons or organizations in recognition or appreciation of service.

Standard 1.7. The educator shall not falsify records, or direct or coerce others to do so.

Standard 1.8. The educator shall comply with state regulations, written local school board policies, and other applicable state and federal laws.

Standard 1.9. The educator shall apply for, accept, offer, or assign a position or a responsibility on the basis of professional qualifications.

(2) Ethical Conduct Toward Professional Colleagues.

Standard 2.1. The educator shall not reveal confidential health or personnel information concerning colleagues unless disclosure serves lawful professional purposes or is required by law.

Standard 2.2. The educator shall not harm others by knowingly making false statements about a colleague or the organization.

Standard 2.3. The educator shall adhere to written policies and state and federal laws regarding the hiring, evaluation, and dismissal of personnel.

Standard 2.4. The educator shall not interfere with a colleague's exercise of political, professional, or citizenship rights and responsibilities.

Standard 2.5. The educator shall not discriminate against or coerce a colleague on the basis of race, color, religion, national origin, age, sex, disability, or family status.

Standard 2.6. The educator shall not use coercive means or promise of special treatment in order to influence professional decisions or colleagues.

### (3) Ethical Conduct Toward Students.

Standard 3.1. The educator shall not reveal confidential information concerning students unless disclosure serves lawful professional purposes or is required by law.

Standard 3.2. The educator shall not knowingly treat a student in a manner that adversely affects the student's learning, physical health, mental health, or safety.

Standard 3.3. The educator shall not deliberately or knowingly misrepresent facts regarding a student.

Standard 3.4. The educator shall not exclude a student from participation in a program, deny benefits to a student, or grant an advantage to a student on the basis of race, color, sex, disability, national origin, religion, or family status.

Standard 3.5. The educator shall not engage in physical or sexual mistreatment of a student.

Standard 3.6. The educator shall not furnish alcohol or illegal/unauthorized drugs to any underage student or knowingly allow any underage student to consume alcohol or illegal/unauthorized drugs in the presence of the educator.

### (4) Ethical Conduct Towards the Learning Environment

Standard 4.1. The educator shall be sure students remain safe by making sure students follow directions and use appropriate equipment and shall be sure supervision is adequate for number of students and the particular study site.

Standard 4.2. The educator shall stay within boundaries and ask property owners before taking anything

Standard 4.3. The educator shall obey all laws protecting plants and animals. All living things are to be respected.

Standard 4.4. The educator shall collect plants or animals only if something very important can be learned from them. The educator should minimize the number of organisms collected, making every effort to keep them alive and return them to their natural habitat. Educators should avoid collecting a rare or endangered species except under special circumstances that would lead to the protection of the species.

I have read the above Code of Ethics and Standard Practices and pledge to comply with standard practices and ethical conduct.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date



## **Kentucky's Certification Program**

### General Guidelines for Makeup Work

Program participants may miss any one workshop. If participants miss more than one workshop, they must make up the workshop the following year. Anyone who misses a workshop is responsible to complete the make-up assignment for that workshop. Makeup assignments are described in detail under "Makeup Assignments" located in your notebook. Missing any part of a workshop requires for all of the makeup work for that workshop be completed. Contact your instructor or KEEC office if you have questions.



## Kentucky's Certification Program

### Course: Environmental Literacy

**Course Dates:** March and April

#### Textbooks

KEEC (2009). *Environmental Education Certification Handbook*.

NAAEE (2000). *Guidelines for the Initial Preparation of Environmental Educators*.

NAAEE (1999). *Excellence in Environmental Education : Guidelines for Learning (K-12)*.

#### Course Description

The course will provide information and experiences for participants to develop: 1) scientific questioning and analysis skills, 2) a foundational knowledge for the interconnectedness between human and natural systems, and 3) the ability to apply foundational knowledge when addressing environmental issues.

This course will involve numerous hands-on activities, demonstrations, peer teaching experiences, reflective thinking experiences, and classroom discussions. Participants will use active and reflective learning skills for course content presented.

#### Course Rationale

The National Standards for Environmental Education, developed by the North American Association of Environmental Education (NAAEE) are defined in the *Guidelines for the Initial Preparation of Environmental Educators* (2000) and *Excellence in Environmental Education:: Guidelines for Learning (K-12)* (1999). Environmental Literacy is one of the strands in each of these sets of standards. The Kentucky P-12 grade standards, called the Program of Studies, are aligned with the national environmental standards. This workshop addresses the subset of Kentucky standards which align to the environmental literacy strand of the national environmental education standards.

#### Course Objectives

1. Participants shall apply scientific process skills and scientific inquiry methods to investigate an environmental question.
2. Participants shall demonstrate knowledge of the processes and systems which create the environment, including ecological and human systems.
3. Participants shall investigate and evaluate environmental issues.
4. Participants shall identify personal and civic actions which involve broad environmental consequences.

## Assessment

Objectives 1 and 2 will be assessed by an examination on the first day of the second workshop. A study guide is provided. Participants will discuss exam questions in small groups. Then, students shall individually complete and submit his or her exam.

Objective 1: Participants will be assessed by an open-response question requiring the application of scientific inquiry methods in the investigation of an environmental problem.

Objective 2: Participants will be assessed by a set of questions about natural systems, human systems, and the interrelationships among those 2 systems.

The assessment of Objectives 3 and 4 will culminate with a debate which will occur the first day of third workshop. This assessment shall be administered in small groups. Participants will be assigned an environmental issue based on a contemporary Kentucky issue. Each participant will play a specific role in a debate about the issue. Participants will be given 5 months to explore the issue. At the end of that time, they will convene under the supervision of an assessment committee, which includes people with a thorough knowledge of the problem and at least one course instructor. By direction of the committee, participants will debate the issue (playing assigned roles), investigate alternate solutions, and create a common plan to resolve the issue. Participants will be assessed on the following: 1) knowledge of the problem, 2) clarity of values and beliefs, 3) openness to consider diverse viewpoints, 4) ability to identify alternate solutions, and 5) ability to arrive at a workable solution.





## Kentucky's Certification Program

### Workshop 1: Environmental Literacy Schedule

#### **Day 1**

1:00 PM

Welcome, Icebreaker, Introductions, Overview of notebook and course  
Scientific Inquiry

1. Activity: The Mystery of the Pendulum
2. Activity: Field, Forest, & Stream (PLT)
3. Scientific Sentences

Systems

1. Activity: Tree Factory (PLT)
2. Activity: Energy Relay
3. Activity: Oh Deer (PW)
4. Global Systems and Resources

Day Reflections- Co-facilitate

5:00

Adjourn

#### **Day 2**

9:00 AM

Discussion of Readings

Peer Teaching on systems, Peer Teaching of systems lesson

Film: **Toast**, National EE Guidelines for Learning K-12

Day Reflections/ Idea Board - Co-Facilitate

5:00 PM

Adjourn

#### **Day 3**

9:00 AM

Activity: Tragedy of the Commons

Activity: From Fiber to Fashion

Kentucky Program of Studies (POS) and Core Content for  
Assessment (CC)

\*Scavenger Hunt of POS & CC

\* Identify which of the following POS & CC are  
Taught by "Tragedy of the Commons" & "From Fiber  
to Fashion"

Reflections, Exam Study Guide

12:00 PM

Adjourn



## Kentucky's Certification Program

### Workshop 2: Environmental Literacy Schedule

#### Day 1

1:00 PM

#### **Environmental Literacy Exam**

- Group Exam

Participants are given 1 hour to discuss exam questions in small groups and 2 hours to respond to the questions individually. Notes and course materials may be used during the study session, and they may **NOT** be used during the examination.

Discussion of exam and leaning experiences

Activity Preparation: **To Dam or Not to Dam (PAW)**

Role Play: **To Dam or Not to Dam (PAW)**

5:00 PM

Adjourn

#### Day 2

9:00 AM

**Issue Analysis:** Small groups, using **To Dam or Not to Dam (PAW)**

Large group discussion

#### **Values Clarification & Analysis**

\*Activity: **Values on the Line (PLT)**

\*Activity: **Ethi Reasoning (PW)**

**Two Hats** (article), Reflection Activity

Film: **The Lorax**, Issue Analysis Components, **applied to The Lorax**

Guidelines & rubric for debate assessment, Assignment to debate groups and roles, Planning time for debate teams

#### **National Guidelines for Learning, Strand 3 and 4.1**

Refer to handout, *National Guidelines for Learning- Environmental Literacy*

5:00 PM

Adjourn

#### Day 3

9:00 AM

Foundations of EE activities and article discussions

NAAEE Non-formal Program Guidelines (ppt)

Idea Board

12:00 PM

Adjourn



## Kentucky's Certification Program

### Course: Instructional Strategies

#### Course Description

This course will provide concepts, skills, and experiences to allow participants to be able to effectively plan, teach, and evaluate environmental education.

#### Rationale

Environmental education that is effectively developed, delivered, and evaluated is an outstanding model for learning and teaching. Due to its interdisciplinary nature it is inclusive of many subjects and provides "connections" so learners can apply, evaluate and synthesize the highest levels of learning in Cognitive Domain of Bloom's Taxonomy.

Since environmental education is more than any one subject taught in formal and non-formal settings, it is essential to provide experiences for persons that reflect knowledge and skills associated with constructing these kinds of learning experiences. Concurrently the learning experience must take into account different learning styles, different approaches to teaching as well as developmentally appropriate techniques and materials.

#### Course Objectives

Each person will be able to:

1. Identify and use diverse teaching methods;
2. Identify and use a variety of appropriate teaching materials, methods, and settings that are interdisciplinary;
3. Determine ways to incorporate technology into teaching;
4. Design instruction that meets various learning styles and student learning;
5. Construct appropriate assessment and evaluation to improve teaching and learning;
6. Review environmental education resources using the NAAEE EE Materials & Guidelines for Excellence;
7. Plan and implement environmental education activities that are effective and safe.



## Kentucky's Certification Program

### Workshop 3 Schedule

#### **Day 1**

1:00 PM Debate, Workshop Introduction, Activity: Petal Around the Roses  
Workshop overview  
Readings discussion

5:00 PM Adjourn

#### **Day 2**

9:00 AM Brain Hemisphere Activity, Learning Styles  
Apple Activity (Sequencing instruction from most concrete → most abstract)  
Dale's Cone, Pipe-Line, Population Game, Bloom's Taxonomy

5:00 PM Adjourn

#### **Day 3**

9:00 AM Unit Plan guidelines, Urban EE: Community Mapping Exercise  
Reflection of Weekend

12:00 PM Adjourn



## Kentucky's Certification Program

### Workshop 4 Schedule

#### **Day 1**

- 1:00 PM Small group discussions, scavenger hunt over summer readings followed by whole group discussion of readings  
Review of certification program to date. EIC video  
EE and the appropriate use of technology  
Materials review, NAAEE Guidelines ppt  
Participants work in groups to apply the six "key characteristics" for Materials review from NAAEE to a selected material.
- 5:00 PM Adjourn

#### **Day 2**

- 9:00 AM Groups report from materials review  
EE and safety, Evaluation and Assessment,  
Systems lessons and the unit plan- walking through a sample unit  
Activities, Writing essential questions  
Group activity: "walk" through the Unit Guidelines and align to core Content and national standards  
Focus groups evaluation of the certification program
- 5:00 PM Adjourn

#### **Day 3**

- 9:00 AM Foundations of EE activities and article discussions  
NAAEE Non-formal Program Guidelines ppt, Idea Board
- 12:00 PM Adjourn



## Kentucky's Certification Program

### Guidelines Environmental Issue Debate

The purpose of the debate is for all who attend to gain a richer understanding of the issue being debated, and an increased appreciation of differing viewpoints held by others. All participants must be present for the entire debate period.

1. Each participant will be assigned a role to play in a debate on a selected contemporary Kentucky environmental issue.
2. The debate will be conducted in a group setting with up 2-4 participants per group.
3. Participants will have 6 months to explore the issue and prepare for their role in the debate.
4. Each small group of participants will debate the issue, playing assigned roles, under the supervision of one or more course instructors.
5. During the debate, instructors will introduce the participants and serve as moderators and timers of the debate. Debate format follows:

#### Opening Statement:

- Each team chooses one person to give an opening statement, which will not exceed two minutes. This statement should explain the team's position & beliefs and provide convincing evidence.
- Every other team member must also make a statement, none of which will exceed one minute. Together, the statements should provide a comprehensive review of the topic without being redundant.

#### Rebuttal:

- At the end of each topic (pro and con), a five-minute break will provide time for each team to formulate rebuttals.
- Each team has two minutes to respond to a point or points made by the opposite team.
- You should speculate about points the other side is likely to make and prepare possible counter arguments before the day of the debate.
- There will then be a five-minute period for questions from the floor before we proceed to the next topic.

Question period:

- The audience may ask questions of either team. Those of you not participating in a particular debate are expected to formulate appropriate questions during opening statements, breaks, and rebuttals.

Development of Solution:

- At the conclusion of all three debates (topics), opposing teams will meet for ten minutes to come up with a possible common solution to the major issue(s) raised by their topic. Each set of opposing teams should choose one person to describe the possible solution in one minute or less.

6. In addition to the debate, participants will submit written documentation of their research of the issue. This documentation will be due on the date of the debate and should include the following information:

- a. A statement of the issue
- b. Clarification of the nature of the issue
- c. The values, attitudes and belief of the assigned role in the debate
- d. Identification of other players (roles) and the values, attitudes and beliefs of these players
- e. Consequences of each viewpoint
- f. Alternative solutions and consequences
- g. Possible solutions that would be agreeable to all roles

7. Participants will be assessed according to the following rubric criteria:



## Kentucky's Certification Program

Assessment Rubric  
Environmental Issues Debate  
Theme 1.3 and 1.4

	<b>Beginning</b>	<b>Developing</b>	<b>Competent</b>
<b>Knowledge of problem</b>	Inadequate knowledge	Adequate knowledge	Thorough knowledge
<b>Expression of value(s)</b>	Inappropriate and/or unclear expression of value(s)	Satisfactory expression of appropriate value(s)	Appropriate value(s) clearly expressed
<b>Expression of belief</b>	Inappropriate and/or unclear expression of belief	Satisfactory expression of appropriate belief	Appropriate belief clearly stated
<b>Willingness to consider diverse viewpoints</b>	Not open to other viewpoints	Limited openness to other viewpoints	Open to other viewpoints
<b>Identification of alternative solutions</b>	Did not identify alternative solutions	Adequate treatment of alternative solutions	Thorough treatment of alternative solutions
<b>Explanation of consequences of possible actions</b>	Inadequate explanation of relevant consequences	Adequate explanation of relevant consequences	Thorough & clear explanation of relevant consequences
<b>Contribution toward a workable solution</b>	Did not contribute to a workable solution	Limited contributions toward a workable solution	Value contribution toward a workable solution
<b>Preparation for debate</b>	Inadequate research of issue	Adequate research of issue	Thorough research of issue
<b>Oral presentation</b>	Weak and/or illogical delivery	Adequate delivery	Professional, logical delivery





## Kentucky's Certification Program

### Debate Protocol

#### Mannerly Conduct

It is a given that flaming, rude comments, and personal attacks are not acceptable in the debate process. Consider that you are joining a community marked by goodwill and a shared commitment to learn and help others learn. Thus, it is expected that all discussion participants will:

- Listen to others' views with care and deliberation;
- Respect the intention of individuals participating in the debate;
- Strive to understand the position of those who disagree with you;
- Value your own experience and knowledge while you value those of others' also;
- Write about your own views with care and deliberation;
- Time your statements carefully so you may state your position within the allowable timeframe; and
- Make your views helpful to the whole community by following the rules of good scholarship that is described below.

#### A Modicum of Proper Scholarship

*Careful and correct use of language is a powerful aid to straight-thinking, for putting into words precisely what we mean necessitates getting our **own** minds quite clear on what we mean.* - William Ian Beardmore Beveridge

- **Be specific**—Claims you want to argue ought to be clearly stated & specific.
- **Verify your claims ... differentiate facts and opinions**—Try to find examples. If your claim isn't something you are able to verify, note that it is your opinion only. Where you can verify, state the sources so others can check.
- **Request logical arguments of yourself**—Don't assume something must be true simply because an "authority" says so, or because a large group of people think so.

#### Strategies

1. Ham it up. Speak with passion and intensity, but not melodrama.
2. Loud is not logic. A quiet voice can command the most attention. An old trick of politicians is to lower their voice so that everyone will listen closely.
3. Choose your experts and sources wisely.
4. Take time to read or quote the literature exactly.
5. Know the position of the other side as well as you know your own position. This way you will not be surprised.



## Kentucky's Certification Program

### Debate Guidelines for Written Documentation

In addition to the debate, each participant will submit written documentation of their research of the issue. This documentation will be due on the date of the debate and should include the following information:

1. A statement of the issue
2. Clarification of the nature of the issue
3. The values, attitudes, and belief of the assigned role in the debate
4. Identification of other players (roles) and the values, attitudes, and beliefs of these players
5. Consequences of each viewpoint
6. Alternative solutions and consequences
7. Possible solutions that would be agreeable to all roles

Debate paper must be organized under these 7 headings.

# KY EE Certification Programs Guidelines for Unit Development



Strands 3-6 of the NAAEE's *Guidelines for the Initial Preparation of Environment Educators* will be assessed through the development of an annotated unit of study. The unit should consist of a minimum of 3 lessons/activities to be taught in sequence about a particular topic that is relevant to your work.

## Unit Format

### **I. Cover Page**

Heading: Unit of Study

Kentucky Non-formal Environmental Education Certification Program

Name

Affiliation

Date

Title of Unit

Environmental Topic

Grade Level or Age of Audience

Disciplines

The units should address a minimum of two content disciplines which are integrated into the unit. Examples of disciplines include social studies, science, math, arts and humanities, etc.

Essential Questions

Essential questions are broad open ended questions that guide the instruction and choice of activities. An example would be "What are the pros and cons of using renewable and non renewable energy sources?"

### **II. Lessons/Activities**

These activities can come from any appropriate source, such as the Projects—WILD, WET, PLT, and FLP. You are not expected to design your own unique lessons. For each lesson, submit the following information:

Learning Objectives

The objectives are what the students should know and be able to do at the end of the lesson. They should be stated in measurable terms in the following format "The learner will be able to . . . . Example: Learners will be able to describe suitable habitat for geese.

Kentucky Core Content for Assessment

The Core Content that is specifically addressed by the learning objective should be identified. This can be copied and pasted directly from the KDE website, <http://www.kde.state.ky.us/KDE/>

National EE Standards Addressed

The national standards that are specifically targeted by the learning objectives should be identified. Specify the grade level.

Materials needed to teach the lesson

Please refer to and attach any handouts or accompanying materials. Also, list any equipment, materials, supplies or technology that is needed. Equipment or technology should be used in at least 2 out of 3 of the lessons.

Procedures (or a copy of the activity)

Assessment

How will you know at the end of the lesson, that your learners have acquired the concepts/skills/attitudes that you intended for them to learn? How will you use this information to adjust instruction as needed?

### **III. Annotation of Unit**

Learning Styles

Based on your activities in Workshop 3, how is the unit appropriate for different learning styles? (Right/Left Brain, FORMAT activity)

Abstraction level

Is your unit designed for a concrete learner or abstract learner or both and how is that appropriate for the age of your learners? (Apple activity)

Safety

Describe strategies for assuring that your learners are in a safe learning environment.

Use of Diverse Instructional Strategies

Describe the different types of instructional strategies used within the unit. This relates to Dale's Cone. Examples might include but are not limited to—cooperative learning, hands-on activities, outdoor activities and inquiry-based activities. The unit should include at least 2 different instructional strategies.

Balanced Views

Explain how the unit is balanced and does not introduce bias in regard to environmental viewpoints (as explained in the Two Hats article)

Learner Views

Explain how the unit encourages the learners to explore different players' values and beliefs as well as their own on an environmental issue (as you did the To Dam or Not to Dam activity).

Environmental/Scientific basis (if appropriate)

Explain the scientific basis for your unit and provide some references that could be used to gain additional knowledge of your topic. For example, if your unit dealt with the rise in black bear population in eastern Kentucky, you might include the following reference:

UK Department of Forestry, *Black Bear Ecology and Colonization in Eastern Kentucky*, Retrieved December 4, 2008 from <http://www.ca.uky.edu/forestry/maehrbearky.php>

#### **IV. Culminating Event**

Describe an activity to be done at the end of the unit that would serve as a review of the entire unit or that would require the learners to apply information or skills learned throughout the unit. This activity should result in a product or performance that has real life applications for an authentic audience. Using the black bear example—after doing 3 lessons on the black bear population, learners could compose a letter or e-mail communication to the Kentucky Department of Fish and Wildlife presenting their views on the proposed 2009 hunting season.



## Kentucky's Certification Program

### Excellence in EE Guidelines for Learning (Pre K-12) A Walk Through the Guidelines

#### Part I

1. For which grade levels are the strands operational?
  2. What are the four strands of guidelines at each grade level? (page numbers)
  3. \*Who developed this set of guidelines?  
\*What was the process used to develop the guidelines? (page numbers)
  4. What are the recommended teaching strategies to use when teaching students about the environment? (page numbers)
  4. What is the framework for the guidelines? (5 Areas and page numbers)
  5. Review A-H on pages 78-94 (old guide) or Framework 1-8 on pages 93-107 (new guide). In general, what information is provided on these pages? How can you use this section of the text as an educator?
  6. Review the "Understanding the Local Environment" page found near the beginning of any grade level section. What is your understanding of the meaning of this information?
  7. Where can you find curriculum frameworks for supplementary EE programs?  
(See numbers)
- 

#### Part 2

1. Review the list of issues and topics (A-L) found in section C on pages 105-106 (old guide) or Outline 3 on pages 118-119 (new guide). Do you teach any of these topics, and if so, which ones?
2. Review the four strands in your grade level (or one of your grade levels.) Identify one general goal or bulleted performance indicator that you currently address in your teaching. In your groups, share what you teach and provide the context for this teaching (what program is it a part of, activities you use, etc.)



## Kentucky's Certification Program

### Study Guide: Environmental Literacy Exam

The exam will be administered at the beginning of the first day of the second workshop in April. Participants will have one hour to discuss the exam questions in small groups and 1.5 hours to respond to the questions individually. Participants may use notes and course materials during the group study section.

#### Course Objectives

The exam will assess the first two objectives of the Environmental Literacy course as follows:

Objective 1: Participants will apply the scientific process skills and methods of scientific inquiry to investigate an environmental question.

Assessment: Participants will be assessed through an open response question in which they are asked to apply the methods of scientific inquiry in investigating an environmental problem.

Objective 2: Participants will demonstrate knowledge of the processes and systems that make up the environment, including ecological & human systems.

Assessment: Participants will be assessed with a set of questions about natural systems, human systems, and the interrelationships among natural and human systems.

#### Format of Exam: Short Answer Questions

**Preparation for Exam:** The exam questions will be based on activities done and discussions held during the workshop.

- Background information provided to Project books (PLT, Project Wild, etc.) for all activities done and discussed during the workshop
- Review of workshop notes and notebook
- Strands 1 and 2 of *Excellence in Environmental Education: Guidelines for Learning (K-12)*



## **Kentucky's Certification Program**

### **Assessment One for Environmental Literacy**

#### **Policies**

1. The first assessment will be administered at the beginning of the second workshop.
2. Beginning promptly at the start of the workshop participants will form into assigned groups and each group will be give the exam. For the next hour, participants are free to exchange information, materials, and expertise.
3. Participants will be given their own copy of the assessment and will then answer the questions of their own. Participants may leave the meeting area but are on the honor system not to speak or work with other participants during this time. Assessment forms must be turned in 1.5 hours.
4. A grade of 75 % is considered passing. Any participant who does not pass will be given ample opportunity to work with instructors and retest.
5. KEEC will keep copies of final graded assessments in confidential files in its offices should review be necessary.





## Kentucky's Certification Program

### Certification Reading Assignments

#### **Read prior to the first class**

- ☆ Two Hats
- ☆ The Value of Environmental Education Cabinet
- ☆ The Essence of Environmental Education Cabinet
- ☆ Land, Legacy, & Learning
- ☆ Charlotte's Webpage

#### **Read prior to the second class**

- ☆ Goals for Curriculum Standards in Environmental Education
- ☆ Guidelines for the Preparation & Professional Development of Environmental Educators
- ☆ Guidelines for Learning: K-12
- ☆ Authentic Assessment in the Informal Setting: How Can It Work for You

#### **Read prior to the third class**

- ☆ Environmental Education: From the Classic to the Contemporary
- ☆ The Tbilisi Declaration
- ☆ Environmental Education's Definitional Problem
- ☆ Urban Environmental Education, from "Introduction," to "Making Urban EE Relevant"
- ☆ Environmental Education and Environmental Interpretation: The Relationships
- ☆ Last Child in the Woods, Richard Louv

## **Certification Reading Assignment (Readings portion)**

Answer any 3 questions out of the 4 listed below. The assignment is due at the beginning of the fourth workshop.

1. The world's first intergovernmental conference on environmental education was organized by the United Nations Education, Scientific, and Cultural Organization (UNESCO) in cooperation with Tbilisi, Georgia (USSR) from October 14-26, 1977. The Tbilisi Declaration was adopted by acclamation at the close of the intergovernmental conference. The declaration noted the unanimous accord in the important role of environmental education in the preservation and improvement of the world's environment, as well as in the sound and balanced development of the world's communities. Included in the declaration were five categories of EE objectives that continue to serve as content organizers for EE today. Please discuss those five categories and their meanings.
2. The field of environmental education does have a history, and has evolved over time and continues to evolve as new challenges become apparent to those of us who call ourselves environmental educators. Please trace the historical development of the field of EE, beginning in the late 19<sup>th</sup> century to the present. Discuss each of the milestones in that history (e.g. conservation education). Then, does your program align itself mostly with the current concept of EE, or does it tend to connect more strongly with one of the field's predecessors? Please explain. Finally, discuss at least one new trend that you think will impact the future development of the field.
3. *The Guidelines for the Preparation and Professional Development of Environmental Educators*, which are currently serving as the national standards for preparing environmental educators in the United States, and in other nations around the globe. Which of the six theme of the Guidelines seems to be emphasized most by your program, and why? Likewise, which of the themes is addressed the least by your program, and why?
4. Included in the philosophy of environmental education has been the challenge of how to deal with issues. There have been many conversations over the years as to how to emphasize the development of students' critical thinking skills. At the cornerstone of that discussion has been the question of how to address controversial issues in teaching. Using what you have learned from the readings (Hug, NAAEE, etc.) discuss the imperative to teach students "how to think" and not "what to think".



## Kentucky's Certification Program

### General Guidelines for Makeup Work

The official policy of the EE certification program is that participants may miss any one workshop. Any other workshops that are missed must be made up in the next year. Anyone who misses a workshop is responsible for doing the makeup work for that workshop (see makeup work section in the notebook). Missing any part of a workshop requires that all the makeup work for the workshop be completed.

#### Makeup Assignment Workshop One

Below are assignment instructions for those absent at the first environmental education certification workshop. The assignment must be completed by the beginning of workshop 2.

- ◆ Choose three activities from the activities section of your notebook. For each activity, choose the grade level you think is most appropriate for that activity.
- ◆ For each activity, identify the Kentucky Core Content standard (see the CD in your notebook) that is most directly taught by the activity.
- ◆ Identify the NAAEE standard that is best taught by that activity. To familiarize yourself with NAAEE standards, look in *Guidelines for the Preparation and Professional Development of Environmental Educators*. Beginning on page 27, you will see an executive summary of the NAAEE standards. A more in depth view of the strands and guidelines may be found in *Excellence in Environmental Education - Guidelines for Learning (Pre K-12)*, (also in your notebook).
- ◆ For each activity identify the natural or human system you think is most relevant.



## Kentucky's Certification Program

### Makeup Work for Workshop Two

Read the activity, *Values on the Line* in the activities section of your notebook.

- ♦ Circle the number of each value statement (student sheet) that comes closest to your belief system. Choose 2 or these statements and answer the following questions about your rankings:
  - What reason would you give for supporting this position?
  - What values do you hold that underlie your beliefs on these issues?
- ♦ Write a brief paragraph describing whether and why you think it is better to be "up-front" about your own beliefs when you teach, or to try and be value free.

Read Strand Three in the 12<sup>th</sup> grade guidelines section of the National Guidelines for Learning K-12. (This publication may be found in the back of your notebook.)

Choose an environmental issue in which you are interested and describe how you would lead students through the five steps under Strand 3.1A (page 63)

Identifying and Investigating Issues.

### Makeup Work for Workshop Three

1. Find an activity that is appropriate for environmental education in an urban setting and write a rationale for its use in an urban setting.
2. Go to the following website to review Bloom's taxonomy and write a question at each level based on an EE activity that you use on a regular basis.  
<http://web.uct.ac.za/projects/cbe/mcqman/mcqappc.html>
3. Choose an EE activity with which you are familiar and discuss the following questions:
  - a. Which areas of Dales' Cone were addressed and how?
  - b. Which parts of the brain, left and/or right, were activated and how?
  - c. Which of the four learning styles discussed at the workshop were addressed and how?



## Kentucky's Certification Program

### Makeup Work for Workshop Four

1. Go to the national "materials guidelines" on the NAAEE website <http://naaee.org/plages/npeee/materials.html> (or use those in your notebook). Using an EE material or curriculum of your choice, outline briefly whether or not the material meets the six criteria set out in the Guidelines.
2. Read the following article: <http://www.oriononline.org/pages/om/05-5o m/Monke.html>. With this article in mind, describe the appropriate use of one kind of technology that you might use in teaching about the environment. (If you have read the book Last Child in the Woods by Richard Louv, you may use that as a backdrop instead of the article.)
3. Go to the national "program guidelines" on the NAAEE website <http://naaee.org/pages/npeee/programss.html> (or use the ones in your notebook). Using your own program or one with which you are familiar, outline briefly whether the program meets the characteristics of a strong EE program.